

REMARKS***Objection to Issuing the Present Action as Final; Request for Reconsideration***

Prior to discussing this action on the merits, applicants
5 must raise an objection to the present action having been issued
as a final action.

In applicants' reply of February 13, 2009, the claims rejections were indeed overcome based on the present application having a priority date ahead of US 2004/0254424.

10 In the present action, examiner stated in his response to arguments:

"Applicant's arguments filed 2/13/2009 have been fully considered but they are not persuasive. The applicant's argument that the reference Simkulet et al. (U.S. Pat. No. 2004/0254424) does not have an earlier filing date than the applicant's application is incorrect. The reference Simkulet et al. (U.S. Pat. No. 2004/0254424) claims priority to a provisional application having a filing date of 4/15/2003 which is an early enough filing date for the reference of Simkulet et al. to be considered prior art."

Examiner's rejections of the present claims were not necessitated by any amendments by applicants, because

applicants did not make any claims amendments in their February 13, 2009 reply. Further, applicants did successfully overcome the rejections of October 21, 2008 based on their priority claim. As a result of this,

5 examiner in the present action has now cited what is effectively a new reference, not previously cited by examiner for claim rejections, namely, provisional application US 60/462,951, and used this as a new ground for rejection. Nor has examiner made any findings as to

10 what "subject matter that is disclosed in the provisional application" (see, e.g., MPEP §901.04) and how that subject matter precludes allowance of the claims in this application. Thus, the current §103(a) rejection requires a non-final, rather than a final action.

15 While the earlier cited US 2004/0254424 does make a priority claim to provisional application US 60/462,951, said provisional US 60/462,951 was not cited by examiner in the office action of October 21, 2008, and was only cited for the first time in the present action. There is still

20 to date no citation of what subject matter in the provisional is the basis for rejection here. If examiner was basing his October 21, 2008 rejections on US 60/462,951 in addition to or instead of US 2004/0254424, he had a duty to make this clear at the time, and point to subject matter

in US 60/462,951 upon which the rejection was based.

Instead, examiner only cited US 60/462,951 for the first time in the present action (and has still not explicitly cited this by its serial number US 60/462,951 anywhere in

5 the record), and at the same time made the present action

final, without applicant having been afforded the

opportunity to respond to this newly-cited reference in a non-final action. Applicant can only reply to rejections that are actually made by the examiner, based on specific

10 references to subject matter actually disclosed in the

purported prior art reference. If examiner intended to

cite provisional US 60/462,951, he should have done so in the October 21, 2008 office action and made clear those disclosures in US 60/462,951 upon which he was relying, or

15 he should have made this current action non-final.

As such, it is applicants' view that the final rejection was improper, and applicants respectfully request that the present action be reconsidered and converted to a non-final action. *Applicants further request that the*

20 *present reply be regarded as a response to a non-final*

action in which the amendments contained herein are entered as a matter of right, without the necessity of filing a request for continued examination (RCE).

Claim Rejections - 35 USC § 103Independent claims

Applicants have amended independent claim 1 to incorporate all aspects of claims 2 and 4, which are now cancelled. They 5 have similarly amended independent claim 22 to incorporate all aspects of claims 23 and 25, which are now cancelled.

Additionally, the preamble of claim 1 is amended to refer to seamlessly integrating forward and panoramic fields to achieve a continuous wide field of view, with a parallel change 10 to claim 22. Additionally, the body of claim 1 now adds the recitation that "said secondary and primary reflector holes comprising diameters selected for achieving said continuous wide field of view by accounting for the geometry of said primary reflector, the geometry of said secondary reflector, the 15 separations of said primary reflector and said secondary reflector one from another along said optical axis, and a defined boundary location between said forward and panoramic fields of view; wherein: said primary reflector, said secondary reflector, said at least one field collecting element and said 20 at least one field focusing element, as configured in combination, substantially match magnifications and F/#s as between said forward and panoramic fields and thereby project a substantially seamless boundary between said forward and panoramic fields onto a detection plane." A similar amendment

is made to claim 22.

This continuous, seamless field of view, which now appears in the preamble, and which is achieved as specified in the bodies of claims 1 and 22, is a fundamental inventive feature of 5 the claimed apparatus that is not disclosed in provisional application US 60/462,951.

Applicants' disclose said continuous and seamless field of view (paragraphs [0051], [0056], [0057], [0060] and [0061] of applicant's pre-grant publication US 2008/0247061) such that:

10 1. light from the same angle collected independently by the two optical systems (panoramic and forward) projects on the same point in the image plane;

 2. magnification of the optical systems is the same, such that an item which is imaged by both optical systems 15 appears the same size in the image plane; and

 3. light intensity is continuous across the image plane.

We shall now clarify how applicants' invention achieves such a continuous and seamless field of view in one apparatus, and so is a patentable advance over the prior art. This is best 20 understood with reference to Figure 3 of applicants' drawings (shown for convenience in Figure 1 below), and its description in the specification in paragraph [0060] of US 2008/0247061:

"Although a boundary between the forward field of view **318** and the panoramic field of view **320** is

illustrated on the schematic in Figure 3, this is only
to illustrate the difference between the image
collected by the forward imaging lens group **106** and
that collected by the primary reflector **102**. *In*
5 *actuality* the omnidirectional optical system **100**
produces a *continuous, integrated image* on image plane
110 in which the boundary between the fields of view
is not evident."

Further, in paragraph [0061] of US 2008/0247061, it is
10 stated:

"This field of view is achieved by seamlessly
integrating a forward field of view **318** with a
panoramic field of view **320** on a single image plane
110. The forward and panoramic fields of view **318**,
15 **320** are non-overlapping and there is no blind spot or
gap between them. The boundaries of the forward and
panoramic fields of view **318**, **320** are relatively
parallel; in particular, they gently converge and
eventually overlap."

20 Especially, it is made clear just past the middle of
paragraph [0061] (added emphasis):

*"The magnification, and the F/#, are matched
between the forward and panoramic fields of view **318**,
320.* The image formed on the image plane **110**,

therefore, seems continuous, with no differences in brightness or size, and no distortion at the seamless boundaries."

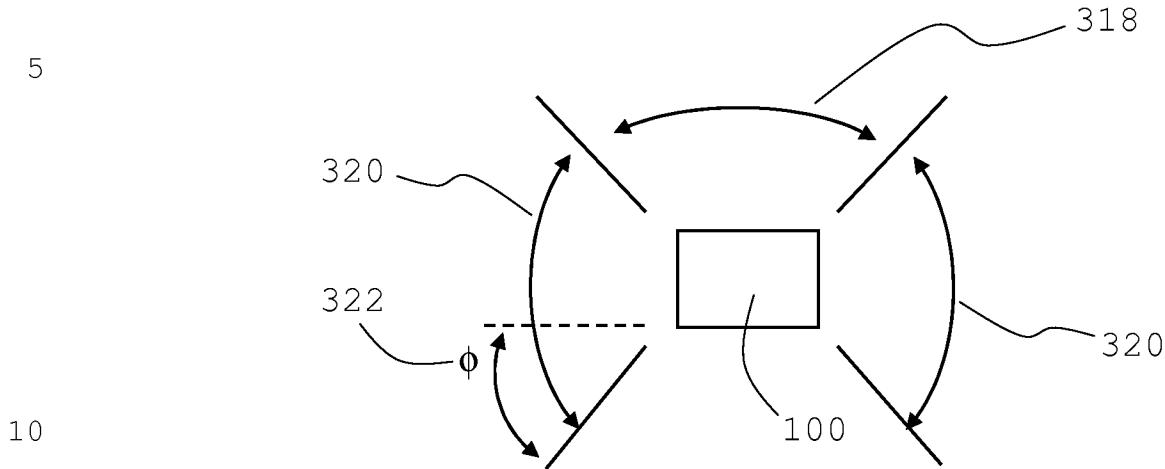


Figure 3

Figure 1: Application Figure 3

15 In comparison, Figure 2 of the provisional application US
60/462,951 for Simkulet (US 2004/0254424) teaches away from a
seamless boundary with the boundary lines shown for the
panoramic field of view **128** and the forward field of view **130**.

20 In particular, the specification of 60/462,951 teaches an
apparatus that allows for two essentially independent fields of
view to co-exist on the same image plane, motivated solely by
the objective of bringing both paths (forward and panoramic)
into focus on the image plane. The sole variables taught in the
specification of 60/462,951 engineered to achieve this

objective, are the geometries of the first and second reflectors.

Specifically, the US 60/462,951 specification states on page 6, lines 3-5, "The surface geometry of both the first reflector **124** and the second reflector **126** can be optimized to obtain the desired PFOV 128 for a specification." This is further evidenced in the Objects on the Invention, in which the fifth object states, "It is an object of the present invention to provide an endoscope design in which the boundaries of the forward field of view and the peripheral field of view can be customized to fit to specific application needs." This object implies the intention to be able to tailor the fields of view only. *It teaches away from a seamless field of view by customizing the fields of view independently. Never is the motivation to have a seamless image referred to. Never is it disclosed for suggested that part of the means for achieving this is to utilize matched magnification and matched F# as in the present invention, and as is now recited in the amended claims.*

As such, applicants' independent claims are not disclosed or suggested or motivated by (the indirectly-cited) US 60/462,951, and thus are allowable over all prior art of (direct or indirect) record.

In addition to all of the foregoing, US 2004/0254424

contains additional disclosures which were *not* included in US 60/462,951 which examiner cites for priority. For those additional disclosures, *the priority of US 60/462,951 does not hold.* Examiner has not at all reviewed for the record, what is 5 in the US 60/462,951 disclosure, nor how it applies to applicant's claims, nor has examiner even cited US 60/462,951 by number. Thus, at present, all rejections are based on an assertion of priority by examiner, without any record review of the substantive content of the priority document and how the 10 disclosure of that document actually bear on applicants' claims, and without even citing US 60/462,951 directly by number as a reference.

Dependent claims

15 Claims 7, 8, 9, 28, 29, 30 and 39 were rejected under 35 USC §103 as being obvious in view the disclosures in paragraph [0037] of US 2004/0254424, and provisional application 60/462,951 from which this claims priority. The subject matter of paragraph [0037] of US 2004/0254424, however, is not included 20 in provisional application 60/462,951 filed April 15, 2003 and therefore are not afforded the priority of the provisional application. As previously established, the provisional priority of the present application 60/542,736 predates the filing of the non-provisional 2004/0254424, and therefore,

anything in US 2004/0254424 which is not also fairly disclosed in US 60/462,951 cannot be used as prior art.

In addition, all dependent claims are now allowable, at least by virtue of being dependent upon allowable independent 5 claims 1 and claim 22, and in addition, by their own patentable point of distinction in their own right, and / or based on their combination with the independent claims.

Allowable Subject Matter

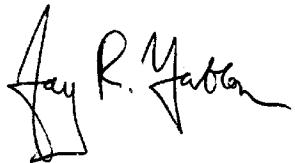
10 Applicants appreciate the indication of allowable subject matter for claims 5, 11, 17, 29, 21, 32, 38, 41 and 42, and look forward to allowance of the remaining claims in view of the foregoing amendments and remarks.

15 ***Conclusion***

With all rejections of record having been overcome, applicants look forward to receiving a notice of allowance in the near future.

As noted earlier, if this reply does not result in 20 allowance of all claims, applicants' counsel hereby respectfully requests a telephone interview with examiner Timothy J. Thompson, following receipt of this reply, and prior to issuance of any further office action.

Respectfully submitted,



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